

CLAIMS

1. A method for digitally printing on an article comprising:

- 5 (a) applying a fluid glazing material to an article creating a coated surface on the article;
- (b) jetting a chromophore-containing fluid onto the coated surface; and
- (c) firing the article.

10 2. A method as in claim 1 wherein the fluid glazing material contains an underprinting agent.

3. A method as in claim 1 further comprising the step of jetting a fluid primer containing an
15 underprinting agent onto the coated surface, such that the fluid primer contacts the chromophore-containing fluid.

20 4. A method as in claim 1 wherein the article is a ceramic.

5. A method as in claim 1 wherein the chromophore-containing fluid comprises a transition metal salt.

25 6. A method as in claim 5 wherein the transition metal salt is selected from the group consisting of nitrates, chlorides, acetates, chromates, citrates, sulfates, and combinations thereof.

30 7. A method as in claim 5 wherein the metal ion provided by the transition metal sulfate salt is selected from the group consisting of cobalt, iron, chromium, copper, manganese, nickel, uranium, lead, gold,

molybdenum, silver, tin, vanadium, cesium, neodymium, and combinations thereof.

8. A method as in claim 1 wherein an additional
5 coating selected from the group consisting of a glaze, an adhesive, a colorant, and a reflective material is applied.

9. A method for digitally printing on a ceramic
10 article comprising:

- (a) applying a fluid glazing material to an article creating a coated surface;
- (b) jetting a chromophore-containing fluid onto a transfer medium;
- 15 (c) adhering the transfer medium to the coated surface; and
- (d) firing the article.

10. A method as in claim 9 wherein the fluid
20 glazing material contains an underprinting agent.

11. A method as in claim 9 further comprising the step of jetting a fluid primer containing an underprinting agent onto the coated surface.

25 12. A method as in claim 9 wherein the article is a ceramic article.

13. A method as in claim 9 wherein the chromophore-
30 containing fluid comprises a transition metal salt.

14. A method as in claim 13 wherein the transition metal salt is selected from the group consisting of

nitrates, chlorides, acetates, chromates, citrates, sulfates, and combinations thereof.

15. A method as in claim 13 wherein the metal ion
5 provided by the transition metal sulfate salt is selected from the group consisting of cobalt, iron, chromium, copper, manganese, nickel, uranium, lead, gold, molybdenum, silver, tin, vanadium, cesium, neodymium, and combinations thereof.

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16. An aqueous inkjettable composition for printing on ceramics or other glazed articles comprising:

- 15 a) an effective amount of a chromophore, with the proviso that from about 0.6% to 50% by weight of a transition metal ion provided by the chromophore be present in the composition; and
b) an effective amount of a humectant.

17. An aqueous inkjettable composition as in claim
20 16 wherein the transition metal ion is present at from about 5% to 40% by weight.

18. An aqueous inkjettable composition as in claim
25 16 further comprising an effective amount of a member selected from the group consisting of co-solvents, biocides, buffers, viscosity modifiers, surfactants, and combinations thereof.

19. An aqueous inkjettable composition as in claim
30 16 wherein the humectant is present at from 5% to 90% by weight.

20. An aqueous inkjettable composition as in claim 16 wherein said humectant is selected from the group consisting of ethylene glycol, diethylene glycol, triethylene glycol, tetraethylene glycol, polyethoxylated glycerols, N-methyl pyrrolidone, butyrolactone, diethanolamine, triethanolamine, 1,2-propanediol, 1,3-propanediol, 1,2-butanediol, 2,3-butanediol, 1,4-butanediol, hexylene glycol, 1,5-pentanediol, 1,6-hexanediol, 1,2,6-hexanetriol, ethylene glycol monobutyl ether, 1,3-dimethyl-2-imid-azolidinone, dimethylsulfone, tetramethylene sulfone, 2,2'-sulfonyldiethanol, methylsulfoxide, 2,2'-thiodiethanol, and combinations thereof.